

WHAT IS CLAIMED IS:

1. A composition comprising a slurry comprising calcined kaolin, wherein at least about 40% by weight of the calcined kaolin has a particle size of at least about 1 μm , and the slurry has a solids content of at least about 58% by weight, relative to the total weight of the slurry.
2. The composition according to claim 1, wherein at least about 40% by weight of the calcined kaolin has a particle size ranging from about 1 μm to about 10 μm .
3. The composition according to claim 1, wherein wherein at least about 45% by weight of the calcined kaolin has a particle size of at least about 1 μm .
4. The composition according to claim 1, wherein at least about 50% by weight of the calcined kaolin has a particle size of at least about 1 μm .
5. The composition according to claim 1, wherein at least about 40% by weight of the calcined kaolin has a particle size of at least about 2 μm .
6. The composition according to claim 1, wherein the slurry has a solids content of at least about 60% by weight, relative to the total weight of the slurry.
7. The composition according to claim 1, wherein the slurry further comprises at least one thickener.
8. The composition according to claim 7, wherein the at least one thickener is chosen from cellulosic thickeners, montmorillonite, smectite clays, hydrophobically modified ethoxylated urethanes, polyacrylates, polyvinyl pyrrolidone, sodium alginate, xanthan gum, silica thickeners, sodium magnesium silicate, acrylic acid copolymers, and nonionic hydrophobically modified polyethers.
9. The composition according to claim 8, wherein the at least one thickener is a cellulosic thickener chosen from alkyl celluloses, carboxymethyl celluloses, ethylhydroxyethyl celluloses, hydroxymethyl celluloses, hydroxyethyl celluloses, and hydroxypropyl celluloses.

10. The composition according to claim 7, wherein the at least one thickener is present in an amount effective to stabilize the slurry

11. The composition according to claim 10, wherein the at least one thickener is present in an amount ranging from about 0.01% to about 4% by weight, relative to the total weight of the slurry.

12. The composition according to claim 11, wherein the at least one thickener is present in an amount ranging from about 0.01% to about 2% by weight, relative to the total weight of the slurry.

13. The composition according to claim 1, wherein the slurry further comprises at least one dispersant.

14. The composition according to claim 13, wherein the at least one dispersant is present in an amount ranging from about 0.01% to about 2% by weight, relative to the total weight of the slurry.

15. The composition according to claim 14, wherein the at least one dispersant is present in an amount ranging from about 0.01% to about 1% by weight, relative to the total weight of the slurry.

16. The composition according to claim 13, wherein the at least one dispersant is chosen from polyelectrolytes, sodium salts of weak acids, potassium salts of weak acids, and water-soluble organic polymeric salts.

17. The composition according to claim 16, wherein the at least one dispersant is a polyelectrolyte chosen from polyacrylates and copolymers containing polyacrylates.

18. The composition according to claim 13, wherein the at least one dispersant is chosen from 2-amino-2-methyl-1-propanol, polyacrylates, sodium hexametaphosphates, polyphosphoric acid, condensed sodium phosphate, alkanolamines, tetrasodium pyrophosphate, trisodium phosphate, sodium hexametaphosphate, tetrasodium phosphate, sodium tripolyphosphate, sodium silicate, sodium carbonate, sodium salts of naphthalene sulfonic acid, potassium salts of naphthalene sulfonic acid, sodium salts of polymeric carboxylic acid, potassium salts of polymeric carboxylic acid, and polymethacrylates.

19. The composition according to claim 1, wherein the slurry further comprises at least one biocide.

20. The composition according to claim 19, wherein the at least one biocide is present in an amount ranging from about 0.01% to about 1% by weight, relative to the total weight of the slurry.

21. The composition according to claim 19, wherein the at least one biocide is chosen from quaternary ammonium compounds, organosulphur compounds, and halogen-containing compounds.

22. The composition according to claim 19, wherein the at least one biocide is chosen from metaborate, sodium dodecylbenzene sulphonate, sodium benzoate, benzisothiazolin, isothiazolin, thione, glutaraldehyde, bromonitropropanediol, bromohydroxyacetophenone, dibromodicyanobutane, sodium orthophenylphenate, dodecylguanidine hydrochloride, oxazolidines, adamantanes, hydantoins, dibromonitrilopropionamide, bromonitrostyrene, methylenebisthiocyanate, tetrakis hydroxymethyl phosphonium sulfate, sodium dimethyldithiocarbamate, and chloromethylphenol.

23. The composition according to claim 1, wherein the slurry has a pH ranging from about 8 to about 10.

24. The composition according to claim 1, wherein the slurry further comprises at least one pH modifier.

25. The composition according to claim 24, wherein the at least one pH modifier is chosen from sodium carbonate, amino-2-methyl-1-propanol, sodium hydroxide and ammonium hydroxide.

26. The composition according to claim 1, wherein the calcined kaolin has not been subjected to mechanical grinding.

27. The composition according to claim 1, wherein the calcined kaolin has been subjected to mechanical grinding.

28. The composition according to claim 1, wherein the calcined kaolin comprises mullite.

29. A method of preparing a slurry comprising:

- (a) providing a calcined kaolin, wherein at least about 40% by weight of the calcined kaolin has a particle size of at least about 1 μm ;
- (b) combining the calcined kaolin with water; and
- (c) obtaining a slurry having a solids content of at least about 58% by weight, relative to the total weight of the slurry.

30. The method according to claim 29, further comprising introducing at least one dispersant prior to (c).

31. The method according to claim 29, further comprising introducing at least one thickener prior to (c).

32. The method according to claim 31, wherein the thickener is introduced in an amount effective to stabilize the slurry.

33. The method according to claim 29, further comprising introducing at least one pH modifier prior to (c).

34. The method according to claim 29, further comprising mechanically grinding the calcined kaolin prior to (b).

35. The method according to claim 29, wherein the calcined kaolin has not been subjected to mechanical grinding.

36. A method of preparing a slurry having a solids content of at least about 58% by weight, relative to the weight of the slurry, said method comprising:

- providing a calcined kaolin, wherein at least about 40% by weight of the calcined kaolin has a particle size of at least about 1 μm , and the calcined kaolin has not been subjected to mechanical grinding; and
- introducing the calcined kaolin to water.

37. A paint comprising a slurry comprising calcined kaolin, wherein at least about 40% by weight of the calcined kaolin has a particle size of at least about 1 μm , and the slurry has a solids content of at least about 58% by weight, relative to the total weight of the slurry.

38. A method of making a coated paper or coated paper board comprising:

coating a fibrous substrate with slurry, the slurry comprising calcined kaolin wherein at least about 40% by weight of the calcined kaolin has a particle size of at least about 1 μm , and the slurry has a solids content of at least about 58% by weight, relative to the total weight of the slurry.